

L 45274-66

ACC NR: AP6024904

described. Experience shows that the preservation of spare parts and instruments by using a dicyclohexylamine nitrite inhibitor ensures safe storage for six years under conditions of up to 100% relative humidity. [NT]

SUB CODE: 15/ SUBM DATE: none/

Card 2/2 *ed*

ACC NR: AP6032087

(A,N)

SOURCE CODE: UR/0317/66/000/009/0059/0061

AUTHOR: Netreba, V. (Engineer; Lieutenant commander); Putilov, V. (Engineer; Lieutenant commander)

ORG: None

TITLE: Use of air inhibitors for corrosion protection

SOURCE: Tekhnika i vooruzheniye, no. 9, 1966, 59-61

TOPIC TAGS: corrosion protection, corrosion inhibitor

ABSTRACT: The authors discuss a method of using anticorrosive inhibitors for protection of inner surfaces of boilers, economizers, evaporators, tanks and other similar equipment that are out of service. The method consists in filling the inner space with air saturated with inhibiting chemical agents such as cyclohexylamine carbonates or dicyclohexylamine nitrites. A special device shown in a pictorial drawing is used for producing the needed air flow with inhibitors. The device consists of a rectangular container equipped with an electric heater, a sieve and a set of flat boxes filled with inhibitor crystals. The air flow being pressed into the container from one end passes through the heater, the sieve and the boxes, thereby absorbing volatile inhibitors and carrying them out the other end through a connecting hose to the inner space to be protected. The temperature inside the container is maintained at about 100 C for carbonates and about 170 C for

Card 1/2

ACC NR: AP6032087

nitrites. The preparation of the device for operation and the filling of the boxes with inhibitors is described. The blowing of air through boilers, etc. is continued until inner surfaces are covered with protective white deposits. It is mentioned that the protection is more effective if the treated surfaces are left wet after removing water from boilers and pipings. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: None

Card 2/2

PUTILOV, Z.M., inzhener.

Experience in swimming pool construction. Gor. khoz. Mosk. 29
no.5:33-35 My '55. (MLRA 8:6)
(Moscow--Swimming Pools)

GERASIMOV, I., inzh.; NASONOV, K., inzh.; PUTILOV, V., inzh.

Protection of ship mechanisms by liquid inhibited lubricants. Mor. flot 23 no.8:21-22 Ag '63. (MIRA 16:11)

L 53913-65 EWT(m)/EFF(c)/ENA(d)/I/ENP(t)/ENP(b) Pr-4 EW/JD/WB/DJ

ACCESSION NR: AP5013412

UR/0375/65/000/002/0069/0072

25
B

AUTHOR: Korotnenko, V. P. (Engineer, Captain); Gerasimov, I. I. (Candidate of technical sciences, Engineer, Lieutenant colonel); Zakharov, N. A. (Engineer, Commander); Putilov, V. Ye.; Sharapov, V. D. (Engineer, Lieutenant commander)

TITLE: Liquid protective lubricants as a new way of preserving marine equipment

SOURCE: Morskoy sbornik, no. 2, 1965, 69-72

TOPIC TAGS: liquid lubricant, thin film lubricant, oil additive, ship storage, protective oil, corrosion prevention

ABSTRACT: The article discusses the so-called liquid or thin-film lubricants used for the storage of ships, particularly brands K-17 and K-19. Such lubricants are

Card 1/2

L 53913-65

ACCESSION NR: AP5013412

(by a factor of up to 4) and guarantee one year of protection of the equipment
(internal combustion engines, auxiliary turbine mechanisms, bearings, etc.).
Under the most adverse conditions, however, that they protect

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: FP

NO REF SOV: 000

OTHER: 000

Jac
Card 2/2

KOROTNENKO, V.P., inzh.-kapitan 1-go ranga; GERASIMOV, I.I., kand.
tekh. nauk, inzh.-podpolkovnik; ZAKHAROV, N.A., inzh.-kapitan
2-go ranga; PUTILOV, V.Ye., inzh.-kapitan 3-go ranga;
SHARAPOV, V.D., inzh.-kapitan 3-go ranga

Liquid protective lubricants, a new means of preserving ship
equipment. Mor. sbor. 48 no.2:69-72 F '65. (MIRA 18:11)

BOGDANOV, F.R., prof.; FARNIYEVA, I.V., kand. tekhn. nauk; PUTILOVA, A.A., kand. med. nauk; BABAYEV, E.A., starshiy nauchnyy sotrudnik; LISENKO, Ye.F., mladshiy nauchnyy sotrudnik; UKRAINETZ, V.S., mladshiy nauchnyy sotrudnik

Basis for construction of rational prophylactic footwear for young children. Ortop., travm. i protez. 25 no.2:13-20 F '64.

(MIRA 18:1)

1. Iz Ukrainskogo instituta ortopedii i travmatologii (direktor - dotsent I.P.Alekseyenko) i Ukrainskogo instituta kozhevenno-obuvnoy promyshlennosti (direktor - kand. tekhn. nauk G.V.Livyy). Adres avtorov: Kiyev, ul. Vorovskogo, d. 27, Institut ortopedii i travmatologii.

KRUK, Z.V. (Kiyev, ul. Gor'kogo, d.39, kv. 18); PUTILOVA, A.A.;
VERNIGORA, I.P.; SAPSAY, Ye.I.; SHARGORODSKIY, V.S.

Data on orthopedic traumatic diseases in the rural population
of Transcarpathian Province. Ortop., travm. i protez. 24 no.12:
48-52 D '63. (MIRA 17:7)

1. Iz Ukrainського instituta ortopedii i travmatologii v Kiyevo
(direktor-dotsent I.P. Alekseyenko, nauchnyy rukovoditel' -
chlen-korrespondent AMN SSSR prof. F.R. Bogdanov).

SHCHERBAKOV, V.K. (Novosibirsk); PUTILOVA, A.T. (Novosibirsk); KOPACH,
Ye.N. (Novosibirsk); VOROB'YEV, G.V. (Novosibirsk)

Power takeoff from half-wave tuned power transmission lines.
Elektrichestvo no.10:31-36 0 '64. (MIRA 17:12)

SHCHERBAKOV, V.K.; PUTILOVA, A.T.; KOPACH, Ye.N.; VOROB'YEV, G.V.

Joint operation of tuned power transmission lines with intermediate systems. Trudy Sib. nauch.-issl. inst. energ. no.1:
40-44 '64. (MIRA 18:5)

RUTILOVA, Aleksandra Alekseyevna, kand.med. nauk; FINOGENOV, S.N.,
red.; BYKOV, N.M., tekhn. red.

[Prevention of deformities in paralyzes following polio-
myelitis and therapeutic gymnastics] Profilaktika deformatsii
i lechebnaia gimnastika pri paralichakh posle poliomyelita;
metodicheskoe posobie dlia vrachei i metodistov. Kiev, Gos-
medizdat, USSR, 1961. 127 p. (MIRA 16:1)
(POLIOMYELITIS) (EXERCISE THERAPY)

PUPILOVA, A. A.

22082 Putilova, A. A. Pentotalovyy narkoz u detey i podrostkov. Brachebdelo, 1949, No. 7, stb 591-96

SC: Istopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

PUTILOVA, A. A.

The effectiveness of functional therapy of scoliotic posture. Acta
chir. orthop. trauma. Cech. 29 no.1:33-36 F '62.

1. Ukrajinsky vedeckovyzkumnyy ustav ortopedie a traumatologie, reditel
doc. I. P. Aleksejenko, vedecky vedouci clen korespondent ALV SSSR.
profesor F. R. Bogdanov.

(SCOLIOSIS prev & control)
(POSTURE in inf & child)

SHCHERBAKOV, V.K.; LUKASHOV, E.S.; OL'SHEVSKIY, O.V.; PUTILOVA,
A.T.; OMBYSH-KUZNETSOV, S.O., red.

[Tuned electric power transmission lines] Nastroennye elektro-
peredachi. [By] V.K.Shcherbakov i dr. Novosibirsk, Izd-vo
Sibirskogo otd-niia AN SSSR, 1963. 271 p. (MIRA 17:4)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Transportno-
energeticheskiy institut.

PUTILOVA, A.T.

Effect of the location of the connection of an intermediate system on the static stability of a half-wave tuned power transmission line taking into account the length of the line with parallel connected coupling transformers. Trudy Transp.-energ. inst. Sib. otd. AN SSSR no.16:3-10 '63. (MIRA 16:11)

PUTILOVA, A.T.; OL'SHEVSKIY, O.V.

Effect of the distribution of compensating apparatus on
the characteristics of long-distance transmission. Izv.Sib.otd.
AN SSSR no.11:19-27 '59. (MIRA 13:4)

1. Transportno-energeticheskiy institut Sibirskogo otdeleniya
AN SSSR.

(Electric power distribution)

SHCHERBAKOV, V. K.; PUTILOVA, A.T.

Intermediate power takeoff from half-wave tuned power transmission
lines. Trudy Transp. energ. inst. Sib. otd. AN SSSR no.14:32-41
'62. (MIRA 16:9)

PUTILOVA, A.T.
SHCHERBAKOV, V.K.; VASIL'YEV, A.I.; PUTILOVA, A.T.; ZAYNULINA, R.S.

Outlook for the development of power resources in Western Siberia
and Krasnoyarsk Territory. Izv. vost. fil. AN SSSR no. 1:79-87 '57.
(MIRA 11:4)

1. Zapadno-Sibirskiy siliyal AN SSSR.
(Siberia, Western--Electric power)
(Krasnoyarsk Territory--Electric power)

PUTILOVA, A.T.; KHALEVIN, V.K.

Carrying capacity of electric power transmission lines with
wavelength compensation. Trudy Transp.-energ. inst. Sib. otd.
AN SSSR no.11:105-120 '60. (MIRA 14:6)
(Electric power distribution)

SOV/112-57-9-18567

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 9, p 65 (USSR)

AUTHOR: Shcherbakov, B. K., Putilova, A. T.

TITLE: Joint Operation of an AC Network and a DC Electric Transmission System
Under Normal Conditions (K voprosu sovmestnoy raboty seti peremennogo i
elektroperedachi postoyannogo toka pri normal'nykh rezhimakh)

PERIODICAL: Tr. Transp.-energ. in-ta Zap.-Sib. fil. AN SSSR, 1956, Nr 6,
pp 3-13

ABSTRACT: Bibliographic entry.

Card 1/1

SHCHERBAKOV, Vasiliiy Kuz'mich; PUTILOVA, A.T.; ZAYNULLINA, R.S.

[Alternative plans for a joint electric power system for Western Siberia and Krasnoyarsk Territory] Variant skhemy ob"edinennoi elektroenergeticheskoi sistemy Zapadnoi Sibiri i Krasnoyarskogo kraia. Akad.nauk SSSR. Zapadno-Sibirskii filial. Transportno-energ.in-t, 34 p.

(MIRA 14:4)

(Siberia, Western--Electric power plants)
(Krasnoyarsk Territory--Electric power plants)

100 77 00 A. A. 7
SHCHERBAKOV, V.K., doktor tekhnicheskikh nauk, professor; PUTILOVA, A.T.,
kandidat tekhnicheskikh nauk.

Integrated operation of a.c. and d.c. power systems under
normal conditions. Trudy Transp.-energ.inst.Zap.-Sib.fil.
AN SSSR no.6:3-13 '56. (MLBA 10:2)

(Electric power distribution)

L 10243-66 EWT(1)/EWA(h)

ACC NR: AP6002409

SOURCE CODE: UR/0105/64/000/010/0031/0036

AUTHOR: ⁵⁵ Shcherbakov, V. K. (Novosibirsk); Putilova, A. T. (Novosibirsk); Kopach, Ye. N. (Novosibirsk); Vorob'yev, G. V. (Novosibirsk) ⁵⁵

ORG: none

TITLE: Power takeoff from half-wave transmission lines ^{25, 55}

SOURCE: Elektrichestvo, no. 10, 1964, 31-36

TOPIC TAGS: electric power production, transmission line

ABSTRACT: The half-wave homogeneous lines considered are 1500 to 3000 km. in length, and the problems involved in taking off power in parallel or in series at various points in the line are analyzed in detail. Line voltage stability improves as the pick-off points are moved closer to the ends of a half-wave line. Within $1/5$ the line length from the ends, parallel transformer-type power take-off is adapted easily whereas series coupling is better toward the center. The equivalent circuit and voltage distribution curves are shown for the line for parallel-transformer power take-off near the ends of the line and for series transformer take-off toward the center. Experiments and calculations show that when power take-off is 20% of the natural power or less, parallel unified intermediate systems coupled toward the line ends are stable, whereas series take-offs are

Card 1/2

UDC: 621.315.05

L 10243-66

ACC NR: AP6002409

stable toward the center of the line under the same conditions. At the line center an intermediate system is practically independent of the line mode and stability. A combined parallel-series transformer take-off may be used over the entire line with stable operation, and by careful selection of parameters, intermediate parallel-series systems can be decoupled from the line modes at the center of the line. Orig. art. has: 16 figures, 1 table, 11 formulas. [JPRS]

SUB CODE: 09 / SUBM DATE: 17Mar64 / ORIG REF: 020

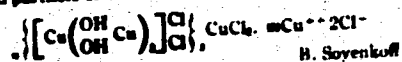
Card

2/2

The structure of colloidal particles. III. Electrochemical properties of stannic acid. I. N. Potilova. *J. Gen. Chem.* (U. S. S. R.) 4, 80-103 (1954); *cf. C. A.* 27, 8846. Atacamite hydroms were made by mixing equal vols. of 0.1 M Cu(OAc) and 0.1 M NaCl. When the sols were dild., and then ultrafiltered, the elec. cond. of the ultrafiltrates did not decrease as fast as the concn. of the sol; beyond a certain dila., however, a proportionate decrease was observed. When the sol was ultrafiltered and the ultrafiltrate dild., the concn. decreased in the same ratio as the concn. Hence dila. of the sol caused the micelles to lose Cu and OAc ions to the dispersion medium; a 4-fold increase in vol. removed the whole of the Cu(OAc), held by the colloid. The cond. of the micellar portion (cond. of the sol minus the cond. of the ultrafiltrate) decreased very little with the concn. and at higher dilns. must have been due to the ionization of atacamite. The cond. of the und. soln. of atacamite was calcd. from the cond. of the ultrafiltrate at higher dilns.; the soly. (calcd. from the cond.) was approx. 0.00056 g. per l. Dila. of the sol with 0.001 N Cu(OAc) increased the micellar cond. about 100 times; the cond. of the ultrafiltrate showed that the micelles

adsorbed Cu acetate. The amt. adsorbed is practically independent of the amt. of the dispersed phase; hence the particles must subdivide with a consequent increase in the total surface. The structural unit of the micelle is: $\left\{ \left[\left(\text{Cu} \begin{smallmatrix} \text{OH} \\ \text{OH} \end{smallmatrix} \right) \text{C}_6 \right] \left[\begin{smallmatrix} \text{O} \\ \text{O} \end{smallmatrix} \right] \left[\begin{smallmatrix} \text{O} \\ \text{O} \end{smallmatrix} \right] \right\} \text{Cu}(\text{AcO})_2 \cdot \text{Cu}^{++}$. IV. Electrochemical study of stannic acid. A. A. Morozov. *Ibid.* 86-103. When the solns. of Cu(OAc) and NaCl are mixed, the elec. cond. drops sharply (formation of complex mols. of atacamite) and continues to decline slowly (growth of the nuclei). Changes in the cond. with the dila. of the sol and ultrafiltrate show that the latter contains fully formed electrolytes only (probably CuCl₂). Undissoc. mols. are present in the concd. sol. The

addn. of dialyzed stannite sols decreases the cond. of Cu(OAc)₂ sols., also of mixts. of Cu(OAc)₂ and NaCl sols. The effect is due to adsorption of the electrolytes by the colloid. The addn. of electrolytes to the sols decreases the charge. The liminal value for NaCl is 0.08, for Na₂SO₄ 0.0025 equivs. per l. The sols pptd. with NaCl can redissolve (pptn. due to common-ion effect decreasing the limitation of the double layer). Na₂SO₄ causes irreversibly (destruction of the double layer). Chem. analysis of the sols, together with the above observations, suggests the following structure for the colloid particles of stannite:



H. Soyenko

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
1A										2									
										Physicochemical properties of gelatin fractions. J. N. Pothorn. <i>Colloid J. (U. S. S. R.)</i> 1, 40-55(1935).--- Fractionation was effected by means of water at 22° rather than the usual 15° and gave quite different fractions. The micellar wts. ranged from 20,000 to 60,000, and the heat of swelling from 0.2 to 20 cal./g. The mol. wts. of the chains bound by principal valence bonds varied from 1400 to 1600. The op. rotation of fraction 4 decreased from 152 at 3° to 135 at 20° and to 118 at 45°. Various fractions are due not to keto-enol tautomerism but to an amino acid internal NH₂ salt isomerism. F. H. Rathmann									
ASD-5LA METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

Theory of permittivity reactions. 1. Rutikova. J. Gen. Chem. (U. S. S. R.) 5, 934-7(1935); cf. Lipatov and Shchegolev. C. A. 28, 4120.—It was previously shown that solid permanganate (I) reacts with $\text{Cu}(\text{OAc})_2$ solns. to form the lake and AcOH (cf. C. A. 24, 766). The lake is a definite compd., the equiv. wt. of I being 135. Further expts. show that the reaction const. changes with temp. according to van't Hoff's equation. The equation, when integrated, reads: $\ln(K_1/K_2) = U \times (T_2 - T_1)/R \times (T_1 \times T_2)$, K_1 and K_2 being the equiv. const. at the temps. T_1 and T_2 , resp., U being heat of reaction and R the gas const. K was detd. at 20° and 40° from the equiv. units of Cu absorbed by I from $\text{Cu}(\text{OAc})_2$ solns. of varying concn. The corresponding value of U was 1600 cal. Direct measurements of U were made by rubbing I with direct mixing the resulting paste with $\text{Cu}(\text{OAc})_2$ soln. in a Schott's calorimeter. The result (corrected for the heat of diss. of the $\text{Cu}(\text{OAc})_2$ soln.) was 1576 cal. Permanganate reactions, therefore, obey the same laws (mass action law, Le Chatelier principle) that govern the equiv. in homogeneous media. b. Suyenkoff

Theory of the structure of highly polymeric compounds.
I. N. Lutikova. *Akademiya Nauk SSSR Tr. Ser. Khim.* 10, 1161 N
(1965); *Chem. Zvesti.* 1965, 1, 348S. A brief review is
given of the work of Lipatov and Lutikova (cf. C. A. 20,
4237) on the structure of the highly polymeric fraction of
gelatin and the theory of lyophilic colloids. M. G. M.

Longitudinal colloids. Optical rotation of gelatin fractions.
S. M. Lignatov and I. N. Putikova. *Colloid J.* (U. S. S. R.) 2, 127-32 (1966); cf. C. A. 30, 20704a. The up-rotations of four gelatin fractions obtained by partial extn. at different temps. are different and decrease with increasing temp. and with time, the less-sol. fractions having higher rotations. The differences are attributed to differences in micellar structure and size rather than to isomerism. The simultaneous presence of all micellar structures stabilizes the gelatin against changes in optical activity.
P. H. Nathmann

ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND QUARTERS

PROCESSES AND PROPERTIES INDEX

2-1

Scorption of water by gelatin. I. PUTILOVA (J. Phys. Chem. Russ., 1936, 12, 286-288).—Scorption of

H₂O from its mixtures with C₂H₆, Et₂O, and COMe₂, and scorption of COMe₂ from its mixtures with C₂H₆ were determined. The scorption of C₂H₆ and Et₂O is immeasurably small. J. J. B.

COMMON ELEMENTS

COMMON VARIABLES INDEX

ASACSLA METALLURGICAL LITERATURE CLASSIFICATION

SECTION 1

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SECTION 100

PROCESSES AND PROPERTIES INDEX																									
1ST AND 2ND INDEX													3RD AND 4TH INDEX												
Raman spectra and the structure of highly polymerized substances. (Rubber, balata and synthetic polymers.) 1. Raman spectra. <i>Uspekhi Khim.</i> 8, 75-82 (1939).—Review and criticism. On the basis of the evidence of Raman spectra, P. discusses the relation of the structures of styrene, polystyrene, PhEt, myrcene, limonene, isoprene and trimethylethylene to those of rubber, balata and synthetic polymers. P. H. Rathmann																									
Lab. Colloid Chem., Chem. Dept., All-Union Inst. Exptl. Medicine m. Gorkiy, Moscow																									
ASM-ELA METALLURGICAL LITERATURE CLASSIFICATION																									
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1ST AND 2ND CROSS																										3RD AND 4TH CROSS																									
PROCESSES AND PROPERTIES INDEX																																																			
CA Solvation of molecules of high molecular weight. I. N. Putilov. <i>Uspehi Khim.</i> 9, 108-9 (1960). Remarks on the previous paper of P. Z. A. Nagovin. Ibid. 110-11. — Potentials with regard to the nature of colloids, their disperse, and nature, the mechanism of the interactions of colloid particles and their heat effects. Cf. C. A. 86, 2828P. F. H. Rathmann																																																			
AS-15A METALLURGICAL LITERATURE CLASSIFICATION																																																			

CA

Behavior of soap dispersions in liquid dielectrics in a constant electric field. I. N. Patilova, L. G. Gladin, and L. M. Meres. *Doklady (USSR) Acad. Sci. USSR*, 71, 81-3 (1980). Formation of peculiar ribbon-shaped structures was observed in 0.1% dispersions of Ba or Zn stearate, and of Ba stearate, in aviation gasoline and in paraffin oil, in an elec. field of 7500 v./cm. between 2 Ag electrodes 0.6 mm. apart. The ribbons start at one electrode, then a fragment breaks away and attaches itself to the other electrode; the 2 fragments continue to grow until they become united. At the stage when the ribbons connect the electrodes, the elec. cond. of the dispersion is increased very considerably, which indicates that the soap ribbons possess a very high elec. cond. Structurally, the ribbons appear to be cryst. N. Thom

PUTILOVA, I. N.

USSR/Physics - Dielectrics
New Techniques

1 Jun 50

"Electric Rupture of Metal Suspensions in Liquid Dielectrics," L. G. Gindin,
L. M. Moroz, I. N. Putilova, Ya. I. Frenkel', Cor Mem, Acad Sci USSR, O. A.
Shpanskaya

"Dok Ak Nauk SSSR" Vol LXXII, No 4, pp 671-674

Describes apparatus used in actual studies of subject rupture. Gives purely
phenomenological (gross macroscopic) description of phenomenon of rupture in
metal suspensions. Theoretical analysis will appear later. Suspensions of
aluminum powder in gasoline, vaseline, oil, etc., were mainly used, varying in
metallic content from 0.005 to 1% (usually 0.1%). Submitted 5 Apr 50

PA 165T102

PUTILOVA, I. N.

USSR/Physics-Dielectrics

1 Sep 50

"Mechanism Governing the Electric Rupture of Metal Suspensions in Liquid Dielectrics," Ya. I. Frenkel', Corr Mem, Acad Sci USSR, L. G. Gindin, L. M. Moroz, I. N. Putilova

"Dok Ak Nauk SSSR" Vol LXXIV, No 1, pp 49-52

Expt indicate that crit rupture voltage E_c is several 1,000 v/cm, e. g., about 4,000 v/cm for Al particles 3-5 microns. Submitted 21 Jun 50.

PA 174T56

FETILOVA, I. N.

L. G. Gindin, I. M. Moroz, I. N. Fetilova, Ia. I. Frenkel. Formation of conducting "bridges" in suspensions of conductors or semiconductors in dielectrics. II. P. 143

April 5, 1950

SC: Journal of Technical Physics, 21, No. 2 (Feb. 1951)

PUTILOVA, I. N.

PHASE I

TREASURE ISLAND BIBLIOGRAPHIC REPORT

ATD 141 - I

BOOK

Call No.: AF551008

Author: PUTILOVA, I. N.

Full Title: LABORATORY MANUAL OF EXPERIMENTAL COLLOID CHEMISTRY (Third Ed.)

Transliterated Title: Rukovodstvo k prakticheskim zanyatiyam po kolloidnoy khimii

Publishing Data

Originating Agency: None

Publishing House: State Scientific and Technical Publishing House of Chemical Literature

Date: 1952

No. pp.: 292

No. of copies: 10,000

Editorial Staff

Editor: Grachev, K. Ya.

Tech. Ed.: Lur'ye, M. S.

Editor-in-Chief: None

Appraiser: None

Text Data

Coverage: Laboratory experiments in the most important fields of colloid chemistry are described. A brief exposition of the theoretical basis precedes the description of every experiment. Diagrams and numerous illustrations of laboratory apparatus are included. All references are to Soviet sources (1932-1950). It is quite informative and very clearly written.

Purpose: The book is designed to serve as a laboratory manual of experimental colloid chemistry for schools of higher education.

PUTILOVA, I.N.

Rukovodstvo k prakticheskim zanyatiyam po
kolloidnoy khimii

AID 141 - I

Facilities: None
No. of Russian and Slavic References: 48
Available: A.I.D., Library of Congress.

2/2

PUTILOVA, I. N.

USSR/Metallurgy - Corrosion, Immunizers

Oct 52

"On the Immunization of Metals Against Corrosion,"
L. J. Gindin and I. N. Putilova

"Dok Ak Nauk SSSR" Vol 86, No 5, pp 973-975

Defines immunizers as substances capable of delaying beginning of corrosion process on metals in hydrocarbon solutions, increasing, sometimes by thousands of times, induction period preceding evident beginning of corrosion. These substances were detected during search for corrosion inhibitors. Names several immunizers of copper, such as anthraquinone, aniline, triethanolamine, quinoline, benzyl alcohol, phthalimide, and

245T26

others. Discusses application of immunizers for protection of steel in kerosene and analyzes difference in action of inhibitors and immunizers, suggesting coefficient for evaluating protective action of latter. Submitted by Acad P. A. Rebinder 28 Jun 52.

PA 245T26

245T26

PUTILOVA, I. N.

✓ 4437. (4) 6
CORROSION OF STEELS BY KEROSENE AND METHODS OF PREVENTION.
 Putilova, I. N., Gindin, L. G., Artamonova, E. V. and Karakova, V. A. (Zh.
 prikl. Khim. (U. appl. Chem., U.S.S.R.), Feb. 1953, vol. 26, 148-154).
 Plates (60 x 20 x 2 mm) of 5 low-alloy steels were immersed (room temp,
 diffuse daylight, O₂ not excluded) in kerosene (b.p. 147-279, neut.
 val. 0.005, I.V. 0.3, S 0.05%) and time to visible corrosion noted.

H-containing (1.5%) steel was most resistant. Corrosion is due to
 oxidation of kerosene on metal surface with formation of acids; 95% of
 corrosion product is Fe⁺⁺⁺ salt of organic acids. Kerosene dried and
 purified by standing over Na causes negligible corrosion. Na benzoate does
 not significantly decrease corrosion in kerosene phase, although inhibiting
 corrosion in water phase if free water is present. Certain organic
 substances (not specified) containing Cl, S, NH₂, and CH groups when added to
 kerosene inhibit corrosivity of latter.
 I.P.

10-13-54
 28/10

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001343710006-6

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001343710006-6"

POTILOVA, I.N.

The behavior of suspensions of metals and semiconductors in liquid dielectrics in a constant electric field. ~~J. G. Gindin and I. N. Potilova, Kolloid Zhur. 16, 325-32 (1954); cf. Doklady Akad. Nauk S.S.R. 94, 277 (1954).~~—Suspensions of powders in gasoline had a low elec. cond. κ as long as the field intensity was low, but at a "crit. intensity" E_c the powder formed a bridge between the electrodes and κ increased. For Al powder, E_c was 4000 for large and 13,000 v./cm. for fine particles; presumably, E_c was the breakdown field for Al_2O_3 films on the surface of Al particles. The κ increased 10⁴ times in Al, 1000 times in Cu, 100 times in a B carbide suspension, and less in Pt and Cu_2O suspensions, as soon as the bridge formed. The E_c was 400 for Cu and 3000 for B carbide. The bridges remained for a time after switching off the field. J. J. Bikerman.

Putlova I. N.

62 ✓ Systematics of Inhibitors of the Corrosion of Metals. I. N. Putlova and L. G. Gindin (Zhur. Prikl. Khim., 1956, 29, (12), 1998-1901).—(In Russian). P. and G. classify anti-corrosion substances into deactivators (which combine with H ions or dissolved O in aq. soln.) and inhibitors (which have some surface effect). There are three types of inhibitors: (1) inhibitors proper, which reduce the corrosion rate but do not prevent the corrosion; (2) inhibitors which prevent the corrosion; (3) inhibitors which prevent the corrosion by forming a protective film on the metal surface.

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001343710006-6

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001343710006-6"

LUTKOVA, L. M., and GINDIN, M. I.

"Structure Formation in Suspensions under the Influence of an Electrical Field" (Strukturoobrazovaniye v suspenziyakh pod vliyaniyem elektrocheskogo polya) from the book Trudy of the Third All-Union Conference on Colloid Chemistry, pp. 182-196, Iz. AN SSSR, Moscow, 1956

(Report given at above Conference, Minsk, 21-4 Dec 53)

PUTILOVA, I.N.

"Physical and colloid chemistry." S.A. Afonskii. Reviewed by I.N.
Putilova. Zhur.fiz.khim. 30 no.8:1908-1909 Ag '56. (MLRA 10:1)
(Colloids) (Chemistry, Physical and theoretical)
(Afonskii, S.A.)

GINDIN, L.G.; MISKINOVA, T.A.; PUTILOVA, I.N.

Kinetics of the reactions of benzene solutions of certain fatty acids with sodium. Dokl.AN SSSR 106 no.4:683-686 P '56.(MIRA 9:6)

1. Predstavleno akademikom A.A. Balandinym.
(Acids, Fatty) (Sodium compounds)

PURILOVA, I.N.; BALEZIN, S.A.

The Second Conference on the Theory of Metal Corrosion Inhibitors.
Zhur.fiz.khim. 31 no.2:522-523 F '57. (MLRA 10:9)
(Moscow--Corrosion and anticorrosives)

TERENT'YEV, Boris Petrovich, prepod.; KITAYEV, Valentin Yevgen'yevich, prepod.; GORBOVITSKIY, Roman Markovich, prepod.; KRAUS, Lyus'yen Adol'fovich, prepod.; PUTILOVA, Iya Nikolayevna, prepod.; Primala uchastiye LYATKOVSKAYA, A.D., inzh.; LYUBSKIY, G.S., otv. red.; VOLODARSKAYA, V.Ye., red.

[Power systems of communication enterprises] Energetika predpriyatii svyazi. Moskva, Svyaz', 1965. 614 p. (MIRA 18:9)

1. Moskovskiy elektrotekhnicheskii institut svyazi (for all except Lyubskiy, Volodarskaya).

Putilova, Iya Nikolayevna

PHASE I BOOK EXPLOITATION

693

Putilova, Iya Nikolayevna, Balezin, Stepan Afanas'yevich, Barannik, Valeriy Pavlovich

Inhibitory korrozii metallov (Inhibitors of Metal Corrosion) Moscow, Goskhimizdat, 1958. 183 p. 5,000 copies printed.

Ed.: Avramova, N. S.; Tech. Ed.: Shpak, Ye. G.

PURPOSE: The monograph is a manual for engineering and technical personnel engaged in the chemical, metal processing, petroleum industries and other industries where the problem of metal corrosion arises.

COVERAGE: The authors describe corrosion inhibitors for metal found in water, aqueous acid, alkaline and salt solutions, and also corrosion inhibitors for use under ordinary atmospheric conditions and in nonaqueous liquid media. In addition to many practical recommendations and numerous experiments, the authors review the theoretical concepts of the mechanism of action of inhibitors. A classification of inhibitors is also given. The authors thank Professor S. G. Vedenkin for valuable suggestions offered upon review of the manuscript. There are 332 references of which 151 are Soviet, 132 English, 35 German, 10 French, 3 Italian, and 1 Latvian.

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Inhibitors of Metal (Cont.)

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Inhibitors of Metal (Cont.)

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AVAILABLE: Library of Congress

Card 5/5

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10/10/58

3-58-7-2/36

AUTHORS: Putilova, I.N., Doctor of Chemical Sciences, Professor,
Raytsyn, G.A., Candidate of Chemical Sciences, Dotsent

TITLE: To Specialize the Teaching of Chemistry (Prepodavaniye khimii priblizit' k spetsial'nosti)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 7, pp 9-14 (USSR)

ABSTRACT: The authors stress the necessity of a complete revision in chemistry teaching methods in vuzes and vtuzes. Though the teaching of chemistry has improved, there is still a tendency to consider this a secondary science. The theoretical part of the chemistry program must be unified, but the choice of practical laboratory tuition must be left entirely to the individual chairs of higher schools.

ASSOCIATION: There are 4 references, 2 of which are Soviet and 2 American. Moskovskiy elektrotekhnicheskii institut svyazi (The Moscow Electrotechnical Institute of Communication)

Card 1/1

5 (4)

AUTHORS:

Balezin, S. A., Beskov, S. D., SOV/76-32-12-32/32
Levant, G. Ye., Putilova, I. N., Figurovskiy, N. A.

TITLE:

L. I. Kashtanov (Obituary) - (L. I. Kashtanov (Nekrolog))

PERIODICAL:

Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 12,
pp 2848 - 2849 (USSR)

ABSTRACT:

The deceased, who died on August 18, 1958, was born in Moscow on November 25, 1902. Between 1920 and 1924 he studied at the Moscow State University. While a student, he worked at the Byuro redkikh elementov (Bureau of Rare Elements) where he devoted his studies to titanium, tantalum, molybdenum, tungsten, and uranium. Between 1924 and 1928 he worked in industry (Elektrougli plant (electrode carbon plant) and Moskovskiy kabel'nyy zavod (Moscow Cable Plant)). From 1928 till 1938 he taught at the Moskovskiy torfyanoy institut (Moscow Peat Institute), at first as an assistant, later as a professor. At the same time he was a collaborator of the Laboratoriya khimii uglia (Laboratory for Carbon Chemistry) (1928 - 1932) and of the Institut azota (Nitrogen Institute) (1932 - 1936). During that time he worked in the fields of peat chemistry, chemistry of

Card 1/4

L. I. Kashtanov (Obituary)

SOV/76-32-12-32/32

the coals of the Moscow basin, natural gas, structure and hydrogenation of Boghead coal, nitrogenous bases in the generator tar of peat, drying of peat, carboxylic acids in peat. He was one of the first scientists to take up the study of methane cracking. From 1936 onwards he investigated the combustion process of the coal of the Moscow region, which is rich in sulfur, and the utilization of sulfur dioxide. In 1942 he wrote his doctor's treatise on the elimination of sulfur dioxide from the flue gases of Moscow coals rich in sulfur and the production of commercial sulfuric acid. (Ochistka topochnykh gazov mnogosernistykh podmoskovnykh ugley ot sernistogo angidrida s polucheniyem tovarnoy sernoy kisloty). From 1938 onwards Kashtanov was professor of chemistry at the Moskovskiy institut khimicheskogo mashinostroyeniya (Moscow Institute for Chemical Machine Building) and specialized in the field of metal corrosion in fused salt baths. From 1942 to 1944 he organised for the VKVSh (All-Union Committee for University Training) the universities of the Mongolian People's Republic and obtained a professorship for chemistry at the Mongol'skiy universitet (Mongolian University). Between 1944 and 1956 he was professor

Card 2/4

L. I. Kashtanov (Obituary)

SOV/76-32-12-32/32

of chemistry at the Moskovskiy inzhenerno-ekonomicheskiy institut imeni S. Ordzhonikidze (Moscow Institute for Engineering Economy imeni S. Ordzhonikidze) and from 1956 onwards professor of chemistry at the Vsesoyuznyy zaochnyy mashinostroitel'nyy institut (All-Union Correspondence Institute of Machine Building). He studied oxidation-reduction processes especially the protective effect of some inhibitors. He also dealt with the chemical restoration of ancient Egyptian limestone and with the analysis of ancient Slavic, ancient Siberian and Scythian bronzes. He was the author of about 90 scientific publications. As far as his organizational activities are concerned, he worked as deputy director of the Peat Institute and of the Institute of Chemical Machinery Building, deputy rector of the Mongolian University and head of the university department of the VKVSh. He was awarded the orden trudovogo krasnogo znameni (Order of the Red Workers' Banner) and medals of the Soviet Union. At the time of his death he was carrying out new investigations on oxidation.

Card 3/4

05375

SOV/106-59-8-7/12

AUTHORS: Myagkova, A.R. and Putilova, I.N.

TITLE: The Action of Phenols on the Corrosion of the Lead Sheaths of Cables

PERIODICAL: Elektrosvyaz', 1959, Nr 8, pp 52 - 56 (USSR)

ABSTRACT: After briefly reviewing the various theories concerning the action of phenols on the corrosion of lead cables, the authors describe their own experimental investigations. These show that phenol in soft water is not an accelerator but, on the contrary, an inhibitor of the corrosion of lead and of lead-antimony alloys. Polyatomic phenols - (resorcinol, etc.) are even more effective as inhibitors. On the other hand, these substances are effective as inhibitors only in neutral aqueous solutions (pH 5.5 - 8.5) and do not delay corrosion of lead in solutions of organic carbonic acids, when $\text{pH} < 5.5$. In such media, these same substances either become accelerators or do not affect the speed of the corrosion to any degree. There are 3 tables and 11 references, 3 of which are English, 3 German and 5 Soviet.

SUBMITTED: May 8, 1959

Card 1/1

5(4)

AUTHOR:

Putilova, I. N.

SOV/76-33-1-39/45

TITLE:

The Temperature Coefficient of the Corrosion Velocity in the Presence of Inhibitors (Temperaturnyy koeffitsiyent skorosti korrozii v prisutstvii ingibitorov)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 1, pp 226-227 (USSR)

ABSTRACT:

Corrosions with a hydrogen separation are exotherm and a temperature rise causes an unwelcome reaction acceleration. The examination of the inhibitor influence on the temperature coefficient (tc) of the velocity of these reactions is of special importance for the optimum conditions of corrosions, the dissolution of deposits and tinder, etc , and for the investigation of the inhibitor effect. Three cases are stated in which the function $\lg \rho = f(1/T)$ (ρ = corrosion velocity) is a straight line even in the presence of inhibitors (Ref 5). On the corrosion of steel 1 (0.1% C) in 5 n H_2SO_4 + 3% thiourea (Fig 1) the effect of the inhibitor can be seen at lower temperatures whereas the effect decreases considerably at higher temperatures. These inhibitors may be compared to labile

Card 1/2

The Temperature Coefficient of the
Corrosion Velocity in the Presence of Inhibitors

SOV/76-33-1-39/45

compounds which act as catalyst poisons. The second inhibitor type is explained by steel 1 in 5 n HCl + 1% urotropine (Fig 2). These inhibitors do not affect the tc of the reaction and may be compared to stable catalyst poisons. By the example of the corrosion of steel 3 (0.3% C) in 4.1 n HCl + 1% narcotine (Fig 3) inhibitors are explained which cause a lower value (than the absolute) of the tc and are of interest for a corrosion stopping in hot solutions. There are 3 figures and 8 references, 6 of which are Soviet.

SUBMITTED: January 10, 1958

Card 2/2

5(4),18(6)

AUTHORS:

Myagkova, A. R., Putilova, I. N.

SOV/76-33-1-40/45

TITLE:

Phenols .. Inhibitors of the Corrosion of Lead in Water
(Fenoly - ingibitory korrozii svintsa v vode)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 1, pp 228-229
(USSR)

ABSTRACT:

There are only few inhibitors known for the protection of lead and its alloys from a corrosion in water although this would be of special importance, e.g. for the protection of cable coverings. However, a few corrosion inhibitors for lead are given in publications (Refs 3-5). The so-called phenol corrosion of lead (Ref 11) takes in a special place. Some authors maintain that phenol favors the corrosion of lead (Ref 12) and others maintain that it acts as an inhibitor (Refs 13-15). Coles and Davies (Kols and Deyvis)(Ref 15) present phenol as a corrosion inhibitor in the case of its being in a concentration of $\sim 1-6\%$. In order to settle this question tests were carried out in the case under discussion, with lead foils (type S-0) in distilled water with additions of phenols (phenol, resorcin, and hydroquinone). The results (Table) show that phenols act as corrosion inhibitors of lead.

Card 1/2

Phenols - Inhibitors of the
Corrosion of Lead in Water

SOV/76-33-1-40/45

A temperature rise reduces the inhibitor effect. At room temperature 1 weight % phenol retards the corrosion reaction 2.6 times only; paraquinone, however, (which was also investigated being a decomposition product of hydroquinone) can retard the corrosion by 31 times. There are 1 table and 18 references, 7 of which are Soviet.

ASSOCIATION: Moskovskiy Elektrot-khnicheskii institut svyazi
(Moscow Electrotechnical Institute for Communications)

SUBMITTED: February 20, 1958

Card 2/2

PUTILOVA, Iya Nikolayevna

Metallic Corrosion Inhibitors, by I.N. Putilova, S.A. Balezin and V.P. Barannik.
New York, London, Pergamon Press, 1960.
196 p. Graphs, tables.
Translated from the original Russian: Ingibatory Korrozii Metallov, Moscow, 1958.
Includes References.

LEVANT, Grigoriy Yefimovich; RAYTSYN, Genrikh Aleksandrovich; NIKOLAYEV, L.A., prof., retsenzent; PUTILOVA, I.N., red.; PAVLOVA, N.N., red.; GRIGORCHUK, L.A., tekhn. red.

[Laboratory work in general chemistry] Praktikum po obshchei khimii. Pod red. I.N. Putilovoi. Moskva, Gos. izd-vo "Vysshaya shkola," 1961. 277 p. (MIRA 15:1)

(Chemistry—Laboratory manuals)

PUTILOVA, Iya Nikolayevna; Primal uchastiye FUKS, G.I. PAVLOVA,
N.N., red.; GOROKHOVA, S.S., tekhn.red.

[Laboratory manual of colloid chemistry] Rukovodstvo k prakti-
cheskim zaniatiyam po kolloidnoi khimii (glavy 7-9 sost.G.I.Fuks).
Izd.4., perer. i dop. Moskva, Gos.izd-vo "Vysshaya shkola,"
1961. 341 p. (MIRA 15:5)

(Colloids)

PUTILOVA, I.N.; MYAGKOVA, A.R.

Corrosion products of lead in hydrocarbon solutions of
carboxylic acids. Zhur.fiz.khim. 35 no.9:1994-1998 '61.
(MIRA 14:10)

1. Moskovskiy elektrotekhnicheskiy institut svyazi.
(Lead--Corrosion) (Butyric acid)

L 1609-66 ENT(m)/EPF(c)/ENP(j)/T/ENP(t)/ENP(b)/EIA(c) RPL JD/WN/WB/RM

ACCESSION NR: AP5021667

UR/0080/65/038/008/1761/1765
620.193.01

AUTHOR: Chislova, Ye. N.; Putilova, I. N.

TITLE: Effect of acrylonitrile on the kinetics of the solution of steel in hydrochloric and sulfuric acids

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 8, 1965, 1761-1765

TOPIC TAGS: corrosion inhibitor, acrylic acid, nitrogen compound, steel, hydrochloric acid, sulfuric acid, solution kinetics/2 steel

ABSTRACT: The article examines the relation of acrylonitrile protective action to its concentration in an aggressive medium at constant temperature, and the effect of this inhibitor on the initial period of corrosion. Experiments were carried out on samples of steel 2 with dimensions of 20 x 50 x 2 mm. To obtain isotherms for the protective action of acrylonitrile, the corrosion rate was determined by the weight method and from the amount of iron ions going into solution. Protective action H was calculated by the following formula

$$H = \frac{p_0 - p}{p_0} \cdot 100\%$$

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L 1609-66

ACCESSION NR: AP5021667

where ρ_0 is the corrosion rate in the uninhibited acid and ρ is the corrosion rate in the inhibited acid. The experiments were carried out at a temperature of 20 ± 1 C. The corrosion rate during the first 30 min of solution of the steel plates was measured by change in iron ion content of the solution. To eliminate the effect of the natural oxide film on the plates, the plates were previously etched in 1 N hydrochloric acid (1 N sulfuric acid) for 20 min, then washed with 1 N hydrochloric acid (1 N sulfuric acid), and then transferred to the solution to be investigated. It was found that, practically speaking, a constant corrosion rate in the acid solutions was reached after 15-20 min from start of reaction, and only in the presence of a sufficient amount of acrylonitrile (about 1%). With a change in content of acrylonitrile, there is a transition from acceleration of the corrosion process to inhibition of the process with increasing acrylonitrile concentration. It was found that on steel plates previously treated (48 hours) with 1 N hydrochloric acid and inhibited with acrylonitrile, the protective effect (33.2%) is retained after long exposure (24 hours) in pure 1 N hydrochloric acid. The authors believe that the special characteristics of the effect of acrylonitrile on the corrosion of steel in hydrochloric and sulfuric acid solutions cannot be

Card 2/3

L 1609-66

ACCESSION NR: AP5021667

explained by absorption of chemically unchanged acrylonitrile on the surface of the metal. Orig. art. has: 4 figures

ASSOCIATION: Moskovskii tekhnologicheskii institut pishchevoi promyshlennosti
(Moscow Technological Institute of the Food Industry)

SUBMITTED: 08Oct64

ENCL: 00

SUB CODE: GC, MM

NR REF SOV: 005

OTHER: 007

Card 3/3

PUTILOVA, I.N.; TRAUBENBERG, S.Ye.

Effect of gamma rays on the change in starch acidity. Prikl.
biokhim. i mikrobiol. 1 no.5:538-543 S-O '65.

(MIRA 18:11)

1. Moskovskiy tekhnologicheskii institut pishchevoy promyshlennosti.

L 05201-57 LWT (m) EG

ZCC NR: AP6018952

(A)

SOURCE CODE: UR/0322/66/000/001/0048/0052

AUTHOR: Putilova, I. N.; Traubenberg, S. Ye.; Korotchenko, K. A.

ORG: Moscow Technological Institute of the Food Industry (Moskovskiy tekhnologicheskii institut pishchevoy promyshlennosti)

TITLE: Properties of potato starch irradiated in gas media

SOURCE: IVUZ. Pishchevaya tekhnologiya, no. 1, 1966, 48-52

TOPIC TAGS: gamma radiation, radiation chemistry, food technology, gas, polysaccharide gamma irradiation, argon, carbon dioxide, oxygen, high vacuum, oxidation, CARBOHYDRATE

ABSTRACT: The effect of starch irradiation in various gas media on starch properties was investigated because the effect different types of media have on the radiolysis of polysaccharides has as yet been inadequately studied and the role of oxygen in radiolysis still questionable. The irradiation was carried out in argon, carbon dioxide, air, oxygen, and in a vacuum with ^{60}Co as the gamma-ray radiation source. The experimental results show that 1) starch undergoes less decomposition and oxidation during its irradiation in argon or carbon dioxide than during irradiation in the other media, 2) the maximum yield of radiolysis products is obtained from the irradiation of starch in an atmosphere of oxygen, 3) during irradiation in a high vacuum of

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UDC. 664.22.058.9

ACC NR: AP6018952

0.4 mm Hg at which the starch retains only 2% of the moisture, the starch decomposition and oxidation is higher than during irradiation in other media, and 4) the higher decomposition and oxidation of starch in a high vacuum might be ascribed to the low content of moisture in the starch which makes it difficult for the free radicals to recombine. The authors thank V. P. Komar, R. G. Zhabankov, and K. A. Potapovich for taking the IR and EPR spectra. Orig. art. has: 3 figures and 1 table. ³

SUB CODE: 06,07/ SUBM DATE: 15Jun65/ ORIG REF: 008/ OTH REF: 010

Card 2/2 LC

ACC NR: AF6014719

(A)

SOURCE CODE: UR/0322/65/000/006/0024/0028

AUTHOR: Traubenberg, S. Ye; Krotchenko, K. A.; Putilova, I. N.

ORG: Moscow Technological Institute of the Food Industry (Moskovskiy tekhnologicheskii institut pishchevoy promyshlennosti)

TITLE: Effect of high doses of cobalt-60 gamma rays on potato starch

SOURCE: IVUZ. Pishchevaya tekhnologiya, no. 6, 1965, 24-28

TOPIC TAGS: ~~infrared~~ radiation effect, radiation chemistry, food technology, processed plant product, carbohydrate, depolymerization

ABSTRACT: In continuation of earlier work with lower doses of 1500 r/min, a total of 18-94 millirad was applied to commercial starch containing 16% moisture, placed in closed ampoules in the presence of air at room temperature. Changes were recorded spectrophotometrically in the ultraviolet and visible ranges. Further determinations included color, amount of reducing substances (iodometry), mean molecular weight (according to end groups), solubility (by refractometer), pH, organic acids, formaldehyde (spectrum), glucose and maltose (paper chromatography). Results showed an increase of destructive processes with increased gamma doses resulting in a weakened structure of the grain which becomes brittle, increase in water-soluble substances (655 fold at 94 millirad) due probably to rupture of the 1-4 and 1-6 glucoside bonds,

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UDC: 664.22.058.43

ACC NR: AF6014719

and appearance of aldehyde end groups. No glucose or maltose were detected. Solubility was higher in the 18-56 millirad interval than at higher doses. Decrease of pH and increase of organic acids, hydrogen ions and carboxy groups was highest at 47-56 millirad. Decrease in optical density paralleled color changes determined with iodine. The absorption maximum at 260-265 $m\mu$ was indicative for dioxycetone. It was concluded that at the above doses, just as at doses below 18 millirad, starch depolymerization will lead to the formation of dextrine-like substances. The radiation induced chemical transformation is accompanied by formation of low molecular compounds: acids, dioxycetone and formaldehyde. No mono- or disaccharides were formed. The values of dissociation constants approximated those of some carboxy-acids such as glycolic, gluconic, and mucic. The irradiated starch retained free radicals for a long time; these probably represent an intermediate step in radiolytic molecular degradation. "We wish to thank P. Yu. Butyagin for determining the free radicals in our samples". Orig. art. has: 4 figures and 2 tables.

²⁰
SUB CODE: 06, 07/ SUBM DATE: 30Dec64/ ORIG REF: 004/ OTH REF: 001

Card 2/2

PUTILOVA, I.N.; CHISLOVA, Ye.N.

Selecting inhibitors for protecting metals from hydrochloric acid
corrosion. Gaz. delo no.9:21-24 '65. (MIRA 18:9)

1. Moskovskiy tekhnologicheskii institut pishchevoy promyshlennosti.

PUTILOVA, I.N.; KOFOTCHENKO, K.A.; GORIN, L.F.

Effect of irradiation with Co^{60} gamma rays on the inhibiting effect of potato starch in the corrosion of lead in soft water. Zhur. prikl. khim. 37 no.12:2612-2615 D '64.

(MIRA 18:3)

1. Moskovskiy tekhnologicheskii institut pishchevoy promyshlennosti.

MYAGKOVA, A.R.; PUTILOVA, I.N.

Organic inhibitors of lead corrosion in soft water. Zhur. prikl.
khim. 37 no.12:2636-2639 D '64. (MIRA 18:3)

KOROTCHENKO, K.A.; FUTILOVA, I.N.

Studying the properties of starch irradiated by gamma rays. Ferm.
i spirt.prom. 30 no.8:16-19 '64. (MIRA 18:1)

1. Moskovskiy tekhnologicheskoy institut pishchevoy promyshlennosti.

KOLESOV, Svyatoslav Nikolayevich; VVEDENSKAYA, Lyudmila
Andreyevna; KHARIN, A.N., prof., retsenzent; RUSTAMOV,
Kh.R., prof., retsenzent; RAYTSYN, G.A., dots.,
retsenzent; LOVTSOV, V.M., dots., retsenzent; LIKONTSEV,
N.N., dots., retsenzent; PUTILOVA, I.N., doktor khim.
nauk, prof., red.; MAKUSHENKO, Ye.N., red.

[Laboratory work in general chemistry] Praktikum po ob-
shchei khimii. Izd.2., perer. i dop. Tashkent, Sredniaia
i vysshaia shkola, 1963. 186 p. (MIRA 17:12)

1. Zaveduyushchaya kafedroy khimii Moskovskogo elektro-
tekhnicheskogo instituta svyazi (for Putilova).

PUTILOVA, Iya Nikolayevna; LEVANT, Grigoriy Yefimovich; RAYTSYN,
Genrikh Aleksandrovich; MENKOVSKIY, Mikhail Abramovich;
KROTO', Ivan Vasil'yevich; LOSEV, Boris Ivanovich;
STUKOVNIN, N.D., red.

[Course in general chemistry] Kurs obshchei khimii. [By]
I.N.Putilova i dr. Moskva, Vysshaia shkola, 1964. 444 p.
(MIRA 18:1)

FUTILOVA, G.N.; RUDENKO, N.V.; TROITS'YEV, A.P.

Protective action of acetylene in the dissolution of iron
in hydrochloric acid. Zhur. fiz. khim. 38 no.2:494-496 F '6.
(MIRA 17:8)

1. Moskovskiy tekhnologicheskii institut pishchevoy promysh-
lennosti.

KOLESOV, S.N.; VVEDENSKAYA, L.A.; KHARIN, A.N., prof., retsenzents;
LOVTSOV, V.M., dots., retsenzents; LIKONTSEV, N.N., kand.
tekhn. nauk, retsenzents; PUTILOVA, I.N., prof., doktor
khim. nauk, red.; TROFIMOV, F.D., red.; BAKHTIYAROV, A.,
tekhn. red.

[Laboratory work in general chemistry] Praktikum po ob-
shchei khimii. Tashkent, Gos.izd-vo Uzb.SSR, 1960. 141 p.
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1. Zaveduyushchiy kafedroy khimii Taganrogskogo radiotekhnicheskogo instituta (for Kharin). 2. Zaveduyushchaya kafedroy khimii Moskovskogo elektrotekhnicheskogo instituta (for Putilova).

MASLOVA, G.M.; PUTILOVA, I.N.

Changes occurring in potato starch grains under the effect of
Co⁶⁰ gamma rays. Izv.vys.ucheb.zav.; pishch. tekhn. no.3:28-35
'63. (MIRA 16:8)

1. Moskovskiy tekhnologicheskii institut pishchevoy promyshlennosti,
kafedra neorganicheskoy khimii.
(Starch) (Gamma rays)

GINDIN, L. G.; MISKINOVA, T. A.; PUTILOVA, I. N.

Reaction kinetics of sodium with the single-phase systems
benzene-water-butyric (or lauric) acid. Zhur. fiz. khim. 36
no.12:2589-2592 D '62. (MIRA 16:1)

1. Moskovskiy elektrotekhnicheskiy institut svyazi.

(Butyric acid) (Benzene) (Sodium)

PUTILOVA, I.N.; MARCHENKO, A.F.; NIKOL'SKIY, K.K.; RAYTSYN, G.A.;
RAZUMOV, L.D.; CHESNOKOVA, T.V., red.; CHURAKOVA, V.A.,
tekhn. red.

[Corrosion of metal telecommunication structures and preventive measures] Korroziia i zashchita metallicheskih sooruzhenii sredstv svyazi. Moskva, Svyas'isdat, 1962.

175 p.

(Electric lines--Corrosion)

(MIRA 16:3)

(Electric lines--Poles and towers)

PUTILOVA, I.N.; MARCHENKO, A.F.; NIKOL'SKIY, K.K.; RAYTSYN, G.A.;
HAZUMOV, L.D.; PUTILOVA, I.N., otv. red.; CHESNOKOVA, T.V.,
red.; CHURAKOVA, V.A., tekhn. red.

[Corrosion and means for preventing it in underground metal
communication structures]Korroziia i zashchita metalliche-
skikh sooruzhenii sredstv svyazi. [By]I.N.Putilova i dr.
Moskva, Svyaz'izdat, 1962. 175 p. (MIRA 16:2)
(Electric lines--Underground) (Electric lines--Corrosion)

PUTILOVA, I.N.; MARCHENKO, A.F.; NIKOL'SKIY, K.K.; RAYTSYN, G.A.;
RAZUMOV, L.D.; PUTILOVA, I.N., otv. red.; CHESNOKOVA, T.V.,
red.; CHURAKOVA, V.A., tekhn. red.

[Corrosion and means for preventing it in underground metal
communication structures] Korroziia i zashchita metalliche-
skikh sooruzhenii sredstv svyazi. [By] I.N. Putilova i dr.

Moskva, Svyaz'izdat, 1962. 175 p.

(MIRA 16:2)

(Electric lines--Underground) (Electric lines--Corrosion)

SOTSKOV, B. S., DEKABRUN, I. YE., PUTILOVA, N. A.

USSR (600)

Electric Relays

Dependence of the time of motion of a movable relay system on the relay parameter.
Avtom. i telem 12 No. 4 (1952)

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED.

SOKOV, Yu.F.; PUTILOVA, Z.D.; VAKULENKO, A.A.; ZUBAREV, N.P.

Extracting aromatic hydrocarbons using a rotor-disk contractor.
Trudy BashNII NP no.6:207-217 '63. (MIRA 17:5)

S/081/63/000/004/036/051
B194/B180

AUTHORS: Sokov, Yu. F., Putilova, Z. D., Kirillov, T. S.

TITLE: The use of rotary-disc contactors for the diethylglycol extraction of benzene

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 522, abstract 4P167 (Tr. Bashkirsk. n-i. in-t po pererabotke nefi, no. 5, 1962, 201 - 205)

TEXT: Results are given of experiments, performed in the BashNII NP, on the diethylglycol extraction of benzene from a fraction of the platforming product on rotary disc extractors 50 and 80 mm diam. The vertical cylindrical shell of the extractor is divided into a number of sections formed by the series of fixed stator rings. In the centre of each section is a flat horizontal disc which is rotated by a shaft passing along the vertical axis of the shell. Height of the extractor is 2 m., the disc pitch is 10 mm., the shaft speed 400 r.p.m. for the 50 mm extractor and 150 r.p.m. for the 80 mm one. The extraction was carried out consecutively in two extractors: in the first the raw material was extracted with fresh diethylglycol and in the second the extracted phase obtained from the first extractor was con-
Card 1/2

The use of rotory disc contactors...

S/081/63/000/004/036/051
B194/B180

tacted with the recycled extract. The raffinate phase from the top of the second extractor was mixed with the raw material and passed to the bottom of the first extractor. The final raffinate phase was withdrawn from the top of the first extractor and the final extracted phase from the bottom of the second extractor. The total output of the extractor for both phases was 17-20 m³/m³. Properties of a typical raw material: boiling range 57-134°; aromatic hydrocarbons - 22.2%, including 9.5% benzene, 9.2% toluene and 3.5% xylenes. In the extraction with 800% (calculated on the crude material) diethylglycol, which contained 4-5% of water, at 85-90° and 100 vol% of the recycled extract each 100 parts of crude yielded 79 parts of the raffinate phase containing 2.5% aromatic hydrocarbons and 21 parts extract containing 97% aromatic hydrocarbons. The extract after purification with sulfuric acid was distilled in the laboratory in a column with 20 theoretical plates and benzene satisfying the ГОСТ 8448-57 (GOST 8448-57) specification was obtained. [Abstracter's note: Complete translation.]

Card 2/2

SOKOV, Yu.F.; FUTILOVA, Z.D.; KIRILOV, T.S.

Using rotor-disk contactors to extract the benzene by diethylene
glycol. Trudy Bash NIINP no.5:201-205 '62. (MIRA 17:10)

SOKOV, Yu.F.; PUTILOVA, Z.D.; KASTANOS, A.Z.; VAKULENKO, A.A.

Using a rotor-disk contactor to extract aromatic hydrocarbons
with diethylene glycol. Trudy BashNII NP no.7:108-113 '64.
(MIPA 17:9)

PUTILOVSKIY, B.M., starshiy inzh.

Constant metallized and carbon resistances. Avtom., telem. i
sviaz' 5 no.4:41-44 Ap '61. (MIRA 14:6)

1. Elektrotekhnicheskiye masterskiye signalizatsii i svyazi
Moskovskoy dorogi. (Electric resistances)

L 63378-65 ENT(1)/EPA(s)-2/EPF(n)-2/T-2/ETC(m) WW

ACCESSION NR: AP5018210

UR/0193/65/000/006/0042/0043
621.521/522.4

AUTHOR: Chistopolov, I. M.; Putilovskiy, F. D.

TITLE: New series of oil-steam high-vacuum pumps

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 6, 1965, 42-43

TOPIC TAGS: pump, vacuum pump, high vacuum pump, oil steam pump/NZT 2M pump,
N5T 2M pump, N8T 2M pump

ABSTRACT: The central design bureau for vacuum equipment at the Council of National Economy of the Mid-Volga District has designed a line of oil-steam high-vacuum pumps NZT-2M, N5T-2M, and N8T-2M as a replacement for the NZT, N5T and N8T pumps